



**6560-50-P**

## **ENVIRONMENTAL PROTECTION AGENCY**

### **40 CFR Part 52**

**[EPA-R08-OAR-2019-0047; FRL-9996-02-Region 8]**

### **Approval and Promulgation of Implementation Plans; Montana;**

### **Regional Haze 5-Year Progress Report State Implementation Plan**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) proposes to approve Montana's regional haze progress report, submitted by the Montana Department of Environmental Quality (MDEQ) as a revision to its State Implementation Plan (SIP). Montana's SIP revision addresses requirements of the Clean Air Act (CAA) and the EPA's rules that require states to submit periodic reports describing progress toward Reasonable Progress Goals (RPGs) established for regional haze and a determination of the adequacy of the state's existing plan addressing regional haze. Montana's progress report explains the measures that have been implemented in the regional haze plan due to be in place by the date of the progress report and that visibility in the majority mandatory federal Class I areas affected by emissions from Montana sources is improving, and that a revision of the plan is not needed at this time. The EPA is proposing approval of Montana's determination that the State's regional haze plan is adequate to meet RPGs for the first implementation period, which extended through 2018 and requires no substantive revision at this time.

**DATES:** Written comments must be received on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-R08-OAR-2019-0047, to the Federal Rulemaking Portal: <https://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from [www.regulations.gov](http://www.regulations.gov). The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

*Docket:* All documents in the docket are listed in the [www.regulations.gov](http://www.regulations.gov) index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in [www.regulations.gov](http://www.regulations.gov) or in hard copy at the Air and Radiation Division, Environmental Protection Agency (EPA), Region 8, 1595 Wynkoop Street, Denver, Colorado 80202-1129. The EPA requests that if at all possible, you contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section to view the hard copy of the docket.

You may view the hard copy of the docket Monday through Friday, 8:00 a.m. to 4:00 p.m., excluding federal holidays.

**FOR FURTHER INFORMATION CONTACT:** Kate Gregory, Air and Radiation Division, Environmental Protection Agency, Region 8, Mailcode 8ARD-QP, 1595 Wynkoop Street, Denver, Colorado 80202-1129, (303) 312-6175, or by email at [gregory.kate@epa.gov](mailto:gregory.kate@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document wherever “we,” “us,” or “our” is used, we mean the EPA.

## **I. Background**

States are required to submit progress reports that evaluate progress towards the RPGs for each mandatory Class I Federal area<sup>1</sup> (Class I area) within the state and in each Class I area outside the state that may be affected by emissions from within the state. 40 CFR 51.308(g). In addition, the provisions of 40 CFR 51.308(h) require states to submit, at the same time as the 40 CFR 51.308(g) progress report, a determination of the adequacy of the state's existing regional haze plan. The first progress report must take the form of a SIP revision and is due five years after submittal of the initial regional haze SIP. Montana declined to submit a regional haze SIP covering all required elements in EPA's Regional Haze Rule, which resulted in the EPA administration of the majority of Regional Haze program in the State since the effective date of the Federal Implementation Program (FIP) of October 18, 2012.<sup>2</sup>

Twelve Class I areas are located in Montana; Anaconda-Pintlar Wilderness Area, Bob Marshall Wilderness Area, Cabinet Mountains Wilderness Area, Gates of the Mountain Wilderness Area, Glacier National Park, Medicine Lake Wilderness Area, Mission Mountain

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<sup>1</sup> Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6,000 acres, wilderness areas and national memorial parks exceeding 5,000 acres, and all international parks that were in existence on August 7, 1977 (42 U.S.C. 7472(a)). See 40 CFR part 81, subpart D for list of Class I Federal areas.

<sup>2</sup> 77 FR 57864 (September 18, 2012).

Wilderness Area, Red Rock Lakes Wilderness Area, Scapegoat Wilderness Area, Selway-Bitterroot Wilderness Area, U. L. Bend Wilderness Area and Yellowstone National Park.<sup>3</sup>

Monitoring and data representing visibility conditions in Montana's twelve Class I areas is based on the ten Interagency Monitoring of Protected Visual Environments (IMPROVE) monitoring sites located across the State.<sup>4</sup>

On November 7, 2017, Montana submitted a progress report, which detailed the progress made in the first planning period toward implementation of the Long-Term Strategy (LTS) outlined in the 2012 regional haze FIP, the visibility improvement measured at Class I areas affected by emissions from Montana sources, and a determination of the adequacy of the existing regional haze plan for Montana. The State provided notice of the Progress Report and a 30-day comment period, which closed on September 22, 2017. The State received one comment of support from Montana-Dakota Utilities. The EPA is proposing to approve Montana's November 7, 2017 SIP submittal on the basis that it satisfies the requirements of 40 CFR 51.308.

## **II. EPA's Evaluation of Montana's Progress Report and Adequacy Determination**

### *A. Regional Haze Progress Report*

This section describes the contents of Montana's progress report and the EPA's analysis of the report, as well as an evaluation of the determination of adequacy required by 40 CFR 51.308(h) and the requirement for state and Federal Land Manager coordination in 40 CFR 51.308(i).

#### **1. Status of Implementation of Control Measures**

In its Progress Report, Montana summarizes the emissions reduction measures that were relied upon by Montana in the regional haze plan for ensuring reasonable progress at the Class I

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<sup>3</sup> Montana Progress Report, Figure 1-1, p. 1-1.

<sup>4</sup> Montana Progress Report, Figure 1-3, p. 1-4.

areas within the State. EPA’s regional haze FIP established RPGs for 2018 and established a LTS.<sup>5, 6</sup> In its Progress Report, the State describes both state and federal emission reduction measures including applicable federal programs (e.g., mobile source rules, Mercury and Air Toxics Rule), various existing Montana air quality measures (the Montana Renewable Portfolio Standard, major source closure, cancellation, and derating) and a description of the State’s Smoke Management Plan (SMP). Montana also reviewed the status of Best Available Retrofit Technology (BART) requirements for the BART-eligible sources in the State. The Montana FIP includes emissions limits for the BART-eligible sources that were determined to contribute to visibility impairment.<sup>7</sup> The three units subject to BART are listed below in Table 1: Sources Subject to BART in Montana.

**Table 1: Sources Subject to BART in Montana<sup>8</sup>**

<b>BART-Eligible Source</b>	<b>BART Source Category</b>
Ash Grove Cement Company	Portland Cement Plants
Oldcastle Cement (formerly Holcim (US), Inc.)	Portland Cement Plants
Colstrip Steam Electric Station Units 1 & 2 (formerly PPL Montana, LLC)	Fossil-Fuel Fired Steam Electric Plants of more than 250 BTUs per hour Heat Input

<sup>5</sup> 77 FR 23995, April 20, 2012, Table 1 – Visibility Impact Reductions Needed Based on Best and Worst Days Baselines, Natural Conditions, and Uniform Rate of Progress Goals for Montana Class I Areas.

<sup>6</sup> 77 FR 24047, April 20, 2012.

<sup>7</sup> 82 FR 17951, April 14, 2017. BART emissions limits for NOX and SO2 were vacated by the U.S. Court of Appeals for the 9<sup>th</sup> Circuit on June 9, 2015 for Colstrip Units 1 and 2 and remanded those portions of the FIP back to EPA for further proceedings. *National Parks Conservation Association v. EPA*, 788 F.3d 1134 (9th Cir. 2015).

<sup>8</sup> 77 FR 23998, April 20, 2012, Table 8 – List of BART-Eligible Sources in Montana.

In its Progress Report, Montana provides the status of these BART-eligible sources in the State.

**Colstrip Units 1 and 2:** The United States Court of Appeals for the Ninth Circuit vacated the emissions limits from the FIP for Colstrip Units 1 and 2 on June 9, 2015.<sup>9</sup> The court determined the FIP emissions limits to be arbitrary and capricious and remanded the decision back to the EPA. The operator and part owner, Talen Energy, did install emission control technologies, including separated overfire air controls, prior to the vacatur of the original FIP BART limits.<sup>10</sup> In its Progress Report, the State explains that nitrogen oxide (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) show a downward trend at Colstrip Units 1 and 2.<sup>11</sup> Additionally, Talen Energy and the other owners of Colstrip Units 1 and 2 entered into an agreement with the Sierra Club in 2016, wherein it was agreed that the units will close by July 1, 2022.<sup>12</sup> The agreement also established NO<sub>2</sub> and SO<sub>2</sub> emissions limits. These emissions limits, listed below, will stay in effect until the units ceases operations as the Consent Decree is binding.<sup>13</sup>

- Unit 1 NO<sub>x</sub> limit – 0.45 lb/MMBtu (30-day rolling average)
- Unit 2 NO<sub>x</sub> limit – 0.20 lb/MMBtu (30-day rolling average)
- Units 1 and 2 SO<sub>2</sub> limit – 0.40 lb/MMBtu (30-day rolling average)

**Oldcastle Cement:** In its Progress Report, Montana describes efforts by Oldcastle Cement to meet the BART emissions limits. While Oldcastle Cement is meeting both particulate matter (PM) and SO<sub>2</sub> BART limits established by the FIP, a revision to the FIP establishing a

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<sup>9</sup> National Parks Conservation Association v. EPA, 788 F.3d 1134 (9th Cir. 2015).

<sup>10</sup> Montana Progress Report, 2-5.

<sup>11</sup> Montana Progress Report, p.3-3.

<sup>12</sup> Montana Progress Report, pp. 2-5. *Sierra Club v. Talen Montana, LLC et al.*, No. 1:13-cv-00032-DLC-JCL, D. Mon. (2016), Doc. 316-1., p. 6.

<sup>13</sup> Montana Progress Report, 2-5. *Sierra Club v. Talen Montana, LLC et al.*, No. 1:13-cv-00032-DLC-JCL, D. Mon. (2016), Doc. 316-1., pp. 7 – 8.

new NO<sub>x</sub> limit became effective on October 12, 2017.<sup>14</sup> Additionally, the facility applied additional emission control technology (i.e., selective non-catalytic reduction (SNCR)) in order to meet the new NO<sub>x</sub> emissions standards and it is meeting those limits.<sup>15</sup>

**Ash Grove Cement:** In its Progress Report, Montana states that Ash Grove Cement installed various emission control technologies, including SNCR modifications to kiln burners, and baghouse control technology to meet the emission limits established for the cement plant.<sup>16</sup> A revised SO<sub>2</sub> limit for Ash Grove Cement was reached under a consent decree and the cement plant was required to meet the new SO<sub>2</sub> limit of no more than 2.0 lb/ton of clinker (30-day rolling average) by April 8, 2015 and an initial NO<sub>x</sub> limit of no more than 8.0 lb/ton of clinker (30-day rolling average) 30 days after September 10, 2014.<sup>17</sup> Additionally, Montana states in its Progress Report that Ash Grove Cement is achieving all of its consent decree and FIP emission limits.<sup>18</sup>

**Table 2: Current Status of Montana Sources Subject to BART**

	Particulate Matter (PM)		Nitrogen Oxides (NO <sub>x</sub> )		Sulfur Dioxides (SO <sub>2</sub> )	
	Limit	Status	Limit	Status	Limit	Status
<b>Colstrip Units 1 &amp; 2</b>	0.10 lb/mmBtu	In Compliance	0.15 lb/mmBtu	See footnote. <sup>19</sup>	0.08 lb/mmBtu	See footnote. <sup>20</sup>
<b>Oldcastle</b>	0.77	In	6.5	See	1.3	In

<sup>14</sup> 82 FR 42738.

<sup>15</sup> Montana Progress Report, 2-6. See 'Oldcastle Compliance Reporting' for additional information.

<sup>16</sup> Montana Progress Report, 2-5 to 2-6.

<sup>17</sup> *United States v. Ash Grove Cement Company*, No. 2:13-cv-02299-JTM-DJW, D. Kan. (2013), Doc. 27 as amended by Doc. 28.

<sup>18</sup> Montana Progress Report, 2-6.

<sup>19</sup> As discussed above, these emissions limits were vacated by the U.S. Court of Appeals for the 9<sup>th</sup> Circuit on June 9, 2015. However, the State describes emissions trending downward for NO<sub>x</sub> and SO<sub>2</sub> in its Progress Report given the application of SOFA emission control technology. Montana Progress Report, p. 3-2.

<sup>20</sup> Emissions limits vacated by the U.S. Court of Appeals for the 9<sup>th</sup> Circuit on June 9, 2015.

<b>Cement</b>	lb/ton clinker	Compliance	lb/ton clinker	footnote. <sup>21</sup>	lb/ton clinker	Compliance
<b>Ash Grove Cement</b>	See footnote. <sup>22</sup>	In Compliance	8.0 lb/ton clinker	In Compliance	11.5 lb/ton clinker	In Compliance

In its Progress Report, Montana provides an update on the State's Smoke Management Plan (SMP).<sup>23</sup> The State provides its open burning rules, as are written in the Administrative Rules of Montana and approved in the SIP, in its Progress Report, which "considers smoke management techniques and the visibility impacts of smoke when developing, issuing and conditioning permits, and when making dispersion forecast recommendations."<sup>24</sup> The SMP is currently the only part of the State's regional haze plan that is approved into the SIP. In its Progress Report, the State provides a description of coordination between Montana and the adjacent State of Idaho to coordinate burn activities of large open burners and federal land managers, including the U.S. Forest Service and the Bureau of Land Management, through participation in the Montana/Idaho Airshed Group.<sup>25</sup> Additionally, Montana describes active involvement during the fall and winter burn seasons by the State's open burn coordinator and meteorologist to evaluate burn type, size and location, and provide close monitoring of the impacts of smoke in the state.<sup>26</sup> Finally, the State cites use of Best Available Control Technology

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<sup>21</sup> A revision to the FIP NO<sub>x</sub> emission limit became effective October 12, 2017. In its Progress Report, Montana describes Oldcastle Cement's plans to install SCNR emission control, re-commissioning and optimization to meet the new NO<sub>x</sub> limit. Montana Progress Report, p. 2-6.

<sup>22</sup> The process weight of the kiln is used to calculate the emission limit and varies. Montana Progress Report, p.2-4.

<sup>23</sup> Montana Progress Report, p.2-12.

<sup>24</sup> Ibid. At this time, the State's Smoke Management Plan is the only element of the regional haze program as set out in 40 CFR 51.308 that is approved in the SIP.

<sup>25</sup> Ibid.

<sup>26</sup> Ibid.



(BACT) requirements for burners as a control measure to meet the requirements of the Regional Haze Rule (RHR).<sup>27</sup>

EPA proposes to find that Montana has adequately addressed the applicable provisions under 40 CFR 51.308(g) regarding the implementation status of control measures because the State's Progress Report provides documentation of the implementation of measures within Montana, including the BART-eligible sources in the State subject to BART.

## 2. Summary of Emissions Reductions

In its Progress Report, Montana presents information on emissions reductions achieved across the State from the pollution control strategies discussed above. The Progress Report includes statewide SO<sub>2</sub>, NO<sub>x</sub>, and PM (fine (PM<sub>2.5</sub>) and coarse (PM<sub>10</sub>)) emissions data from Western Regional Air Partnership (WRAP) emissions inventories.<sup>28</sup> The Progress Report includes the 2002 WRAP emissions inventory (Plan02d) as baseline, the 2014 National Emissions Inventory (NEI) as updated data from the baseline, and 2018 WRAP data (Preliminary Reasonable Progress Inventory for 2018 (2nd Revision) (PRP18b)) as projected emissions.<sup>29</sup>

**Table 3: Changes in Montana Total Emissions, Statewide (tons per year)**

<b>Pollutant (All Sources)</b>	<b>2002 (Plan02d)</b>	<b>2014 NEI</b>	<b>Difference</b>
SO <sub>2</sub>	51,922.70	25,320.91	-51% <sup>30</sup>
NO <sub>x</sub>	243,141.75	165,673.41	-32% <sup>31</sup>
PM <sub>2.5</sub>	77,239.46	113,655.55	47% <sup>32</sup>

<sup>27</sup> Montana Progress Report, p.2-12.

<sup>28</sup> Montana Progress Report, Tables 3-2 to 3-5, pp. 3-6 to 3-9. The WRAP's inventories were developed using EPA's National Emissions Inventory (NEI) and other sources (<https://www.wrapair2.org/emissions.aspx>). The NEI is based primarily upon data provided by state, local, and tribal air agencies (including Montana) for sources in their jurisdiction and supplemented by data developed by the EPA.

<sup>29</sup> For the first regional haze plans, "baseline" conditions were represented by the 2000-2004 time period. *See* 64 FR 35730 (July 1, 1999).

<sup>30</sup> Montana Progress Report, p.3-7.

<sup>31</sup> Montana Progress Report, p.3-6.

<sup>32</sup> Montana Progress Report, p.3-9.

PM <sub>10</sub>	621,276.11	556,810.28	-10% <sup>33</sup>
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As can be seen in Table 3: Changes in Montana Total Emissions, Statewide above, the emissions data shows that there were decreases in emissions of SO<sub>2</sub> and NO<sub>x</sub> over the time period (i.e., 2002 and 2014) of the two emissions inventories listed (Plan02d and 2014 NEI). As explained in Montana's Key Findings, "[a]nalysis shows that, in Montana, the haziest days are primarily caused by wildfire activity both in and outside the state,"<sup>34, 35</sup> (i.e., Washington, Oregon, Idaho, and Canada).<sup>36</sup> The Report further explains that "the methodology for calculating fire emissions has been updated over the years to better reflect actual emissions; therefore," when compared to the methodology used for the 2002 baseline emission inventory, "the 2014 NEI data is likely more reflective of actual annual emissions."<sup>37</sup> The Progress Report explains that "impacts from updated emissions estimation methods are most apparent in particulate matter emissions from fire, particularly prescribed fire."<sup>38</sup> Based on 2002 (Plan02d) and 2014 (NEI) emissions data, total fine PM emissions have increased from the baseline year of 2002 to 2014 by 47 percent.<sup>39</sup> In its Progress Report, the State provides coarse PM emissions data from 2002 (Plan02d) and 2014 (NEI), which shows that while overall coarse PM emissions decreased 10% from 2002 to 2014, emissions from anthropogenic fire significantly increased between 2002 and 2014.

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<sup>33</sup> Montana Progress Report, p.3-8.

<sup>34</sup> Montana Progress Report, p. i.

<sup>35</sup> Montana Progress Report, p. 4-8.

<sup>36</sup> Ibid.

<sup>37</sup> Montana Progress Report, p. 3-5.

<sup>38</sup> Montana Progress Report, p.3-8. Many changes in emissions inventory methodology occurred between 2002 (Plan02d) and the most current actual emissions inventory data presented by the State (2014NEI), which may have resulted in an increase in fine particulate matter in the above comparison rather than an increase in actual emissions of this pollutant.

<sup>39</sup> Montana Progress Report, p.3-9. The Report explains that the Montana FIP had anticipated a smaller growth in the emissions of fine particulates from 2002 to 2018, which it suggests could be partially explained by the different methodologies used in the NEI and a large percentage of emissions coming from both anthropogenic and natural fire.

The EPA proposes to find that Montana has adequately addressed the applicable provisions of 40 CFR 51.308(g) regarding emissions reductions achieved because the State identifies emissions reductions for SO<sub>2</sub> and NO<sub>x</sub>. Additionally, Montana presents sufficient emission inventory information and discussion regarding emissions trends for coarse and fine PM during the 2002 to 2014 time period.

### 3. Visibility Conditions and Changes

In its Progress Report, Montana provides information on visibility conditions for the Class I areas within its borders. The Progress Report addressed current visibility conditions and the difference between current visibility conditions and baseline visibility conditions, expressed in terms of 5-year rolling averages of these annual values, with values for the most impaired (20 percent worst days), least impaired and/or clearest days (20 percent best days). The period for calculating current visibility conditions is the most recent 5-year period preceding the required date of the progress report for which data were available as of a date 6 months preceding the required date of the progress report.

Montana's Progress Report provides figures with visibility monitoring data for the twelve Class I areas within the State and two Class I areas outside of the state shown to be impacted by Montana sources.<sup>40</sup> Montana reported current visibility conditions for the 2011 to 2015 5-year time period and used the 2000 to 2004 baseline period for its examination of visibility conditions and changes in the State.<sup>41</sup> In its Progress Report, Montana presents visibility data, in deciviews, and representative IMPROVE monitors for Class I areas without an IMPROVE monitor, as there

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<sup>40</sup> Montana Progress Report, p.4-1.

<sup>41</sup> For the first regional haze plans, "baseline" conditions were represented by the 2000 to 2004 time period. *See* 64 FR 35730 (July 1, 1999).

are not IMPROVE monitors in each of Montana's twelve Class I areas. Table 4: Montana's Class I areas and IMPROVE Sites, below, shows the IMPROVE monitors used for each Class I area.<sup>42</sup>

**Table 4: Montana's Class I Areas and IMPROVE Sites**

<b>Class I Area</b>	<b>IMPROVE Site</b>
Anaconda-Pintler Wilderness Area	Sula Peak (SULA1)
Bob Marshall Wilderness Area	Monture, MT (MONT1)
Cabinet Mountains Wilderness Area	Cabinet Mountains (CABI1)
Gates of the Mtn Wilderness Area	Gates of the Mtn (GAM01)
Glacier National Park	Glacier (GLAC1)
Medicine Lake Wilderness Area	Medicine Lake (MELA1)
Mission Mountain Wilderness Area	Monture, MT (MONT1)
Red Rock Lakes Wilderness Area	Yellowstone (YELL2)
Scapegoat Wilderness Area	Monture, MT (MONT1)
Selway-Bitterroot Wilderness Area	Sula Peak (SULA1)
UL Bend Wilderness Area	U.L. Bend (ULBE1)
Yellowstone National Park	Yellowstone (YELL2)

Table 5: Visibility Progress in Montana's Class I Areas, below, shows the difference between the current visibility conditions (represented by 2011–2015 data), baseline visibility conditions (represented by 2000–2004 data), and the 2018 RPGs. In addition, EPA has supplemented the data provided by the State by including data for the baseline period, current period, and difference in deciviews using the revised visibility tracking metric described in

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<sup>42</sup> Montana Progress Report, p.4-2.

EPA's December 2018 guidance document.<sup>43</sup> Although this revised visibility tracking metric is applicable to the second and future implementation periods for regional haze (and therefore not retroactively required for progress reports for the first regional haze planning period), the revised tracking metric's focus on the days with the highest daily anthropogenic impairment shifts focus away from days influenced by fire and dust events, and is therefore a better metric for showing visibility progress especially for Class I areas with strong impacts from fire, as was the case for the Class I areas within and affected by emissions from Montana during the first regional haze planning period. This supplemental data is shown in square brackets in Table 5.

**Table 5: Visibility Progress in Montana's Class I Areas<sup>44</sup>**

<b>Montana's Class I Area</b>	<b>IMPROVE Site</b>	<b>Current Period Deciviews 2011 - 2015 (dv)</b>	<b>Baseline Period Deciviews 2000 - 2004 (dv)</b>	<b>Difference in Deciviews (dv) Current - Baseline</b>	<b>MT 2018 RPG</b>
<b>20% Worst Days<sup>45</sup> [20% Most Anthropogenically Impaired Days]</b>					
Cabinet Mountains Wilderness Area	CABI1	14.5 [10.1]	14.1 [10.7]	0.4 [-0.6]	13.31
Gates of the Mtn Wilderness Area	GAMO1	11.7 [7.6]	11.3 [9.0]	0.4 [-1.4]	10.82
Glacier National Park	GLAC1	17.0 [13.8]	22.26 [16.2]	-5.26 [-2.4]	21.48
Medicine Lake Wilderness Area	MELA1	17.9 [15.8]	17.7 [16.6]	0.2 [-0.8]	17.36
Bob Marshall Wilderness Area	MONT1	15.7 [9.7]	14.5 [10.8]	1.2 [-1.1]	13.83
Mission Mountain Wilderness Area	MONT1	15.7 [9.7]	14.5 [10.8]	1.2 [-1.1]	13.83
Scapegoat Wilderness Area	MONT1	15.7 [9.7]	14.5 [10.8]	1.2 [-1.1]	13.83

<sup>43</sup> Technical Guidance on Tracking Visibility Progress for the Second Implementation Period of the Regional Haze Program (December 20, 2018), available at: [https://www.epa.gov/sites/production/files/2018-12/documents/technical\\_guidance\\_tracking\\_visibility\\_progress.pdf](https://www.epa.gov/sites/production/files/2018-12/documents/technical_guidance_tracking_visibility_progress.pdf).

<sup>44</sup> Montana Progress Report, p.4-6.

<sup>45</sup> 77 FR 24090 (April 20, 2012).

Selway-Bitterroot Wilderness Area	SULA1	16.3 [8.5]	13.4 [10.1]	2.8 [-1.6]	12.94
Anaconda-Pintler Wilderness Area	SULA1	16.3 [8.5]	13.4 [10.1]	2.8 [-1.6]	12.94
UL Bend Wilderness Area	ULBE1	14.5 [11.1]	15.1 [12.8]	-0.7 [-1.7]	14.85
Yellowstone National Park	YELL2	12.4 [7.7]	11.8 [8.3]	0.6 [-0.6]	11.23
Red Rock Lakes Wilderness Area	YELL2	12.4 [7.7]	11.8 [8.3]	0.6 [-0.6]	11.23
<b>20% Best Days<sup>46</sup></b>					
Cabinet Mountains Wilderness Area	CABI1	2.6	3.6	-1.0	3.27
Gates of the Mtn Wilderness Area	GAMO1	0.6	1.7	-1.1	1.54
Glacier National Park	GLAC1	5.4	7.2	-1.8	6.92
Medicine Lake Wilderness Area	MELA1	6.5	7.3	-0.7	7.11
Bob Marshall Wilderness Area	MONT1	2.6	3.9	-1.3	3.60
Mission Mountain Wilderness Area	MONT1	2.6	3.9	-1.3	3.60
Scapegoat Wilderness Area	MONT1	2.6	3.9	-1.3	3.60
Selway-Bitterroot Wilderness Area	SULA1	1.6	2.6	-0.9	2.48
Anaconda-Pintler Wilderness Area	SULA1	1.6	2.6	-0.9	2.48
UL Bend Wilderness Area	ULBE1	3.7	4.8	-1.1	4.57
Yellowstone National Park	YELL2	1.5	2.6	-1.1	2.36
Red Rock Lakes Wilderness Area	YELL2	1.5	2.6	-1.1	2.36

As shown in Table 5: Visibility Progress in Montana's Class I Areas, all of the IMPROVE monitoring sites use Class I Areas within the State show improvement in visibility

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<sup>46</sup> 77 FR 24090 (April 20, 2012).

conditions on the 20 percent best days and are meeting the 2018 RPGs.<sup>47</sup> However, while only two of the Class I Areas show improvement in visibility conditions on the 20 percent worst days,<sup>48</sup> all Class I areas show improvement in visibility conditions when looking at the 20 percent most anthropogenically impaired days (shown in square brackets). In its Progress Report, Montana shows that organic carbon is the pollutant that has contributed the most to light extinction at its Class I Areas and that organic carbon is associated with fire.<sup>49</sup> Montana provides an extensive analysis of the impacts from wildfire in its Progress Report and describes wildfire and its impacts as “the main impediment to visibility improvement on the 20% worst days.”<sup>50</sup>

Additionally, in its Progress Report, Montana presents data to confirm that wildfire activity, as can be examined through monitored pollutants (organic and elemental carbon specifically) and satellite and webcam imagery, are present on the majority of days selected as the 20 percent worst days.<sup>51</sup> This means that webcam imagery and satellite data correlate to monitored pollutant data and further prove wildfire is a main impediment to visibility.

The EPA proposes to find that Montana has adequately addressed the applicable provisions under 40 CFR 51.308(g) regarding assessment of visibility conditions because the State provided baseline visibility conditions (2002–2004), more current conditions based on the most recently available visibility monitoring data available at the time of Progress Report development (2011–2015), the difference between these current sets of visibility conditions and baseline visibility conditions, and the change in visibility impairment from 2000 to 2015 at the Class I areas.

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<sup>47</sup> Montana Progress Report, p. 4-6.

<sup>48</sup> Montana Progress Report, p. 4-5.

<sup>49</sup> Ibid.

<sup>50</sup> Montana Progress Report, p. 4-8.

<sup>51</sup> Montana Progress Report, pp. 4-8 to 4-13.

#### 4. Emissions Tracking

In its Progress Report, Montana presents data from the statewide emissions inventory for the 2014 NEI and compares this data to the baseline emissions inventory for 2002 (Plan02d). The pollutants inventoried include SO<sub>2</sub>, NO<sub>x</sub> and PM (fine and coarse). The emissions inventories include the following type of source or activity classifications: point; area; on-road mobile; off-road mobile; point and WRAP area (including oil and gas); fugitive and road dust; anthropogenic fire; natural fire; biogenic; and wind-blown dust from both anthropogenic and natural sources. Table 6 presents the 2002 baseline, 2014 more current data and the 2018 projected statewide emission inventories. As can be seen in Table 3, statewide emissions of both SO<sub>2</sub> and NO<sub>x</sub> are lower than the projected 2018 emissions. Statewide emissions for both coarse and fine PM are projected to exceed the 2018 emission projections. As is discussed above in section 2, Montana cites changes in methodologies used in the NEI and a larger than expected amount of emissions in anthropogenic and natural fire as reasons for an increase in fine and coarse PM over the time period analyzed in the Progress Report.<sup>52</sup>

**Table 6: Emissions Progress in Montana<sup>53</sup>**

	<b>SO2 (tons/year)</b>	<b>NOX (tons/year)</b>	<b>PM Coarse (tons/year)</b>	<b>PM Fine (tons/year)</b>
<b>2002 Total Emissions (Plan02d)</b>	<b>51,922.70</b>	<b>243,141.75</b>	<b>621,276.11</b>	<b>77,239.46</b>
<b>2014 Total Emissions (NEI)</b>	<b>25,320.91</b>	<b>165,673.41</b>	<b>556,810.28</b>	<b>113,655.55</b>
<b>2018 Projected (PRP18b)</b>	<b>45,794.76</b>	<b>180,043.25</b>	<b>675,985.25</b>	<b>83,046.71</b>
<b>Change 2002 - 2018 (%)</b>	<b>-12%</b>	<b>-26%</b>	<b>9%</b>	<b>8%</b>
<b>Change 2002 – 2014 (%)</b>	<b>-51%</b>	<b>-32%</b>	<b>-10%</b>	<b>47%</b>

<sup>52</sup> Montana Progress Report, p.3-8.

<sup>53</sup> Montana Progress Report, Tables 3-2 to 3-5, pp. 3-6 to 3-9.



The data for emissions from anthropogenic fire increased from 713 tons per year (Plan02d) to 26,684 tons per year (2014 NEI),<sup>54</sup> which shows a significant increase rather than the projected decrease. Montana cites changes in methodologies used in the NEI and a larger than expected amount of emissions in anthropogenic and natural fire as reasons for the increase in fine and coarse PM over the time period analyzed in the Progress Report.<sup>55</sup> Montana explains that because “the methodology for calculating fire emissions has been updated over the years to better reflect actual emissions” that “the 2014 NEI data is likely more reflective of actual emissions.”<sup>56</sup> Montana further acknowledges that “it is very difficult to conduct trend analysis on fire (both prescribed and natural) because of the changes in methodology and the inherent variability of the activity.”<sup>57</sup> Finally, the State explains that “[y]ear to year prescribed fire activity can change due to weather and available resources, which in turn greatly affects emissions.”<sup>58</sup>

The EPA is proposing to find that Montana adequately addressed the applicable provisions of 40 CFR 51.308(g) regarding emissions tracking because the State compared the most recent updated emission inventory data available at the time of the Progress Report development with the baseline emissions inventory used in the modeling for the regional haze plan.

#### 5. Assessment of Changes Impeding Visibility Progress

In its Progress Report, Montana provided an assessment of any significant changes in anthropogenic emissions within or outside the State that have occurred. The State cites

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<sup>54</sup> Montana Progress Report, p. 3-8.

<sup>55</sup> Ibid.

<sup>56</sup> Montana Progress Report, p. 3-5.

<sup>57</sup> Montana Progress Report, p. 3-5.

<sup>58</sup> Ibid.

incomplete implementation of BART controls, oil and gas development in Montana, and emissions from nearby states and international sources as impediments to progress in visibility conditions, each of which will be discussed below in turn.

At the time of the analysis done by the State for the Progress Report, not all BART controls had been installed, as compliance dates had not occurred for all facilities subject to BART at that time.<sup>59</sup> This means the impacts of the emissions reductions from BART controls have not been fully realized and are not evident in the State's Progress Report. However, Ash Grove Cement and Oldcastle Units 1 and 2 are currently in compliance with emissions limits.<sup>60</sup>

In its Progress Report, Montana discusses significant growth in the oil and gas sector in Montana, North Dakota and Wyoming. Montana's oil and gas sector is described in the Progress Report.<sup>61</sup> The State explains that emission factors for these activities are not well documented, but are becoming larger issues as oil and gas production increases.<sup>62</sup> The State's report includes an analysis and comparison of production data from North Dakota, Wyoming and Montana.<sup>63</sup> Additionally, Montana cites a Bureau of Land Management Study (BLM) study that projected emissions from the oil and gas sector will continue to impact visibility in the area from now into the future.<sup>64</sup> The State's report concluded that:

The modeling indicated that the close proximity of oil and gas wells to these and other Class I Areas will make it challenging for states to achieve significant visibility

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<sup>59</sup> Montana Progress Report, p. 5-1.

<sup>60</sup> Montana Progress Report, p. 5-2.

<sup>61</sup> Montana Progress Report, p. 5-4.

<sup>62</sup> Ibid.

<sup>63</sup> Montana Progress Report pp. 5-4 – 5-8.

<sup>64</sup> Ramboll Environ US Corporation and Kleinfelder, Inc., "Bureau of Land Management Montana/Dakotas State Office PGM Modeling Study Air Resource Impact Assessment," September 2016.

improvements. Montana and neighboring states will have to further study these impacts in the process of preparing SIP revisions for the 2018-2028 implementation period.<sup>65</sup>

In its Progress Report, Montana describes one of its Class I areas, Medicine Lake, as being an example of the impacts of emissions from international sources. Medicine Lake is very close to the Canadian border (less than 40 miles) and has “the worst visibility in the state on both the clearest and haziest days.”<sup>66</sup> Montana analyzed weather patterns (wind direction, wind speed), satellite imagery, and regional WRAP data that showed emissions from Canada were higher than emissions from Montana and other surrounding states near Medicine Lake.<sup>67</sup> In its Progress Report, Montana states that emissions from Canada are not mentioned in the FIP and are outside of the State’s control.<sup>68</sup> Additionally, the State explains that emissions from a large electric generating unit (EGU) located near Medicine Lake in Canada have remained consistent over the last decade and the State concluded that these emissions may continue to impact visibility at the Medicine Lake Class I area.<sup>69</sup>

The EPA proposes to find that Montana has adequately addressed the applicable provisions of 40 CFR 51.308(g) regarding an assessment of significant changes in anthropogenic emissions. The EPA proposes to agree with Montana’s conclusion that there have been significant changes in non-anthropogenic emissions of visibility-impairing pollutants which have

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<sup>65</sup> Montana Progress Report, p. 5-7.

<sup>66</sup> Montana Progress Report, p. 5-8.

<sup>67</sup> Montana Progress Report, pp. 5-8 to 5-19.

<sup>68</sup> Montana Progress Report, p. 5-20.

<sup>69</sup> Montana Progress Report, p. 6-8. Regarding the Canadian EGU that the State notes is located near Medicine Lake, EPA explains that EPA became aware of information on the SaskPower website that suggests that emissions from this EGU may be decreasing in the next 11 years. “SaskPower 2017-2018 Annual Report” p. 59 (Canada has developed regulatory requirements regarding greenhouse gas emissions for coal-fired generation, which may also decrease emissions that impact visibility). <https://www.saskpower.com/about-us/Our-Company/Current-Reports>, and “Emission Goal Fact Sheet,” <https://www.saskpower.com/Our-Power-Future/Powering-2030/Emissions>.

limited or impeded progress in reducing emissions and improving visibility in Class I areas impacted by the State's sources.

6. Assessment of Current Implementation Plan Elements and Strategies

In its Progress Report, Montana acknowledges the requirements of 40 CFR 51.308(g) to assess whether the current implementation plan elements and strategies are sufficient to enable the State, or other states with Class I areas affected by emissions from the State, to meet all established reasonable progress goals. As seen in Table 5, visibility conditions have improved in the State at all IMPROVE monitoring sites and the State is meeting its RPGs in all Class I areas on the 20 percent best days. Additionally, the State discusses how anthropogenic components (light extinction from sulfates and nitrates) is decreasing across all monitored sites in the State.<sup>70</sup> Conversely, the State explains that visibility conditions have not improved at the majority of monitored sites on the 20 percent worst days. Even so, the State is not of the opinion that the FIP is not sufficient to address visibility impairment in its Class I areas. As discussed above, additional emission controls at sources subject to BART and changes in emissions inventories may contribute to increased visibility in Class I areas within the State. As discussed below, failure to meet all RPGs for the 20 percent worst days was due to emissions from wildfires, not anthropogenic emissions. Because the regional haze regulations define regional haze as “visibility impairment that is caused by the emission of air pollutants from numerous anthropogenic sources,”<sup>71</sup> the inability to meet RPGs for the 20 percent worst days due to nonanthropogenic wildfire emissions does not render Montana's regional haze plan insufficient to enable Montana to meet RPGs.

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<sup>70</sup> Montana Progress Report, 6-2 and 6-3.

<sup>71</sup> 40 CFR 51.301 (emphasis added).

In its Progress Report, Montana discusses the impacts on visibility from wildfire at length. The State presents emissions inventory data which shows that wildfire contributes significantly more to elemental and organic carbon emissions than anthropogenic fire and that the lack of visibility on the 20 percent worst days was due to natural fire and not controlling anthropogenic sources of these pollutants.<sup>72</sup> Additionally, the State describes anthropogenic emissions as decreasing over time. The State explains that “continued implementation of air pollution control measures...make it likely that anthropogenic emissions of visibility-impairing pollutants will continue to decrease with time” and that “Class I Areas affected by emissions from Montana sources will also continue to benefit from controls that have not yet taken full effect due to the timing of the Montana FIP (2012) and the compliance dates described therein (some as late as fall of 2017).”<sup>73</sup> International sources are also shown to impact visibility conditions in Montana at the Medicine Lake Class I Area and Montana acknowledges that the FIP may be insufficient due to international emissions.<sup>74</sup>

The EPA proposes to find that Montana has adequately addressed the applicable provisions of 40 CFR 51.308(g) and agrees with the State’s determination that, other than the Medicine Lake Class I area, its regional haze plan is sufficient to meet the RPGs for its Class I areas.

## 7. Review of Current Monitoring Strategy

For progress reports for the first implementation period, the provisions under 40 CFR 51.308(g) require a review of the State's visibility monitoring strategy and any modifications to the strategy as necessary. In its Progress Report, Montana summarizes the existing monitoring

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<sup>72</sup> Montana Progress Report, 6-4 and 6-5.

<sup>73</sup> Montana Progress Report, p. 6-7.

<sup>74</sup> Montana Progress Report, p. 6-8.

network in the State to monitor visibility at the twelve Class I areas within the State, which consists of Montana relying on the national IMPROVE network to meet monitoring and data collection goals.<sup>75</sup> There are currently IMPROVE sites located near seven of the twelve Class I areas within Montana, as well as representative surrogate monitors located near the remaining five Class I areas in Montana.<sup>76</sup> In the Progress Report, the State concludes that no modifications to the existing visibility monitoring strategy are necessary. The State will continue its reliance on the IMPROVE monitoring network. The IMPROVE monitoring network is the primary monitoring network for regional haze, both in Montana and nationwide.

The EPA proposes to find that Montana has adequately addressed the applicable provisions of 40 CFR 51.308(g) regarding the monitoring strategy because the State reviewed its visibility monitoring strategy and determined that no further modifications to the strategy are necessary.

*B. Determination of Adequacy of the Existing Regional Haze Plan*

The provisions under 40 CFR 51.308(h) require states to determine the adequacy of their existing implementation plan to meet established goals. Montana's Progress Report includes a negative declaration regarding the need for additional actions or emissions reductions in Montana beyond those already in place and those to be implemented by 2018 according to Montana's FIP.<sup>77</sup> In its Progress Report, Montana notifies the EPA that the FIP may be inadequate to address regional haze at the Medicine Lake Wilderness Area Class I area due to the influence of international emissions.<sup>78</sup> Discussion of this issue is addressed above.

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<sup>75</sup> Montana Progress Report, p. 4-3.

<sup>76</sup> Montana Progress Report, p. 4-2.

<sup>77</sup> Montana Progress Report, p. 6-8.

<sup>78</sup> Ibid.

The EPA proposes to conclude that Montana has adequately addressed 40 CFR 51.308(h) because (1) the visibility trends in the majority of Class I areas in the State indicate that the relevant RPGs will be met via emission reductions already in place (except as explained above that some RPGs will not be met due to nonanthropogenic wildfire emissions not subject to control pursuant to Montana's regional haze plan), and therefore the FIP does not require substantive revisions at this time to meet those RPGs, and (2) because Montana has notified EPA that the FIP may be inadequate to address regional haze at the Medicine Lake Wilderness Area Class I area due to international emissions.

### **III. Proposed Action**

The EPA is proposing to approve Montana's November 7, 2017, Regional Haze Progress Report as meeting the applicable regional haze requirements set forth in 40 CFR 51.308(g) and 51.308(h).

### **IV. Statutory and Executive Order Reviews**

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely proposes to approve state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);

- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of



Indian country, the proposed rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Greenhouse gases, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

**Authority:** 42 U.S.C. 7401 *et seq.*

Dated: June 28, 2019.

**Gregory Sopkin,**

*Regional Administrator,*

*EPA Region 8.*

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